

REMARKS

This is in response to the final Office Action dated February 24, 2000 (Paper No. 37) and the Examiner Interview held on August 23, 2000. Reconsideration and withdrawal of the new rejections and objections raised in the Office Action are respectfully requested. Applicants' representatives appreciate the courtesies extended to them during the interview conducted on August 23, 2000. During the interview, applicants' representatives and the Examiner discussed the rejection based on the recapture rule. In view of the Interview, applicants are filing this Continued Prosecution Application with method claims to replace the product claims.

Product claims 1-12, 16, 28, 31 and 43-68 have been canceled without prejudice or disclaimer. Applicants intend to file a divisional application directed to the product claims. New claims 69 to 100 have been added. Support for new claims 69 and 72 can be found at column 4, lines 37 to 62 and at column 5, line 52 to column 6, line 11. Support for new claims 70 and 98 can be found at column 4, lines 52 to 55. Support for new claims 71 and 99 can be found at column 6, lines 24 and 25. Support for new claims 87 and 97 can be found throughout the original disclosure, for example, in Figure 1 and at column 4, lines 1-21 and 50-55. The remainder of the added method claims substantially correspond to previously pending product claims as set forth in the following chart.

New Method Claims	Pending Product Claims
73	44
74	45
75	46
76	48
77	50
78	51
79	52
80	53
81	54
82	55
83	56
84	57

85	58
86	59
87	See above
88	2 & 3
89	61
90	62
91	63
92	64
93	65
94	66
95	67
96	68
97	See above
98	See above
99	See above
100	49

The specification has been amended at column 4, line 17, after “elastic plate 2.” to provide explicit antecedent basis in the specification for the term “a first free space” as that term is used in the claims. Column 4, line 20 of the specification has been amended to provide explicit antecedent basis in the specification for the term “a first clearance” and “second free space” as that term is used in the claims.

Upon entry of the amendment, claims 69 to 100 are pending in the application. All of the changes made to the pending claims during this reissue proceeding are shown in the above rewritten claims with appropriate underlining to show the additions, and brackets to show the deletions, in accordance with 37 C.F.R. § 1.121(b). An explanation of the support in the disclosure of the patent for each of these changes to the claims is provided in the remarks accompanying the amendment filed on November 17, 1998 and above. Moreover, a Second Supplemental Reissue Declaration covering some of the changes made by this Amendment and all previous amendments was filed on November 17, 1998. A Third Supplemental Reissue Declaration covering changes made by this Amendment and not covered by a prior declaration will be submitted upon a finding

that the application is in condition for allowance in accordance with MPEP 1444 at page 1400-31 (July 1998 edition).

Paragraph 5 of the February 24, 2000 Office Action -- Objection To The Specification

The specification has been amended at column 4 to address this objection. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

Paragraph 6 of the Office Action --Section 112, second paragraph rejections

Claims 16, 28, 31 and 43-68 stand rejected under 35 U.S.C. § 112, second paragraph. With respect to the objection to "movable" in claims 16 and 31, applicants have drafted claims 69 and 72, which contain the limitations of claim 16, to recite "moves axially." With respect to the objection to the terms "first portion," "free space" and "first free space," applicants have drafted the claims to further distinguish them from each other. The specification has also been amended as described above to provide reference with respect to the drawings where each of these features can be found. The term "substantially" in claims 55 and 63, (corresponding to new claims 82 and 91) has been removed.

Paragraph 7 of the Office Action -- Improper recapture rejection under 35 U.S.C. § 251

Claims 16, 28, 31 and 43-68 stand rejected under 35 U.S.C. § 251 as being improper recapture of broadened claimed subject matter which had been previously surrendered. In view of new claims 69 to 72, applicants respectfully submit that the new claims are no longer subject to recapture.

New claims 69 to 72 claim a method for shifting a resonance frequency of a flexural or bending vibration of a crankshaft assembly of an internal combustion engine out of a target frequency band of a forced vibration.

Method claim 69 and the claims that depend thereon include all the limitations of claim 43, which applicants gratefully acknowledge the Examiner has not rejected over any prior art of record. Regardless of the Examiner's position regarding

recapture of claims 43 and 47, there can be no recapture with respect to method claim 69 and the claims that depend thereon, because these claims are being presented for the first time during prosecution of the present reissue application. The only method claims that were previously on-file were method claims 6 to 8 which were present in the originally filed application. However, these claims were directed to a method for forming a crankshaft assembly, and not the method claims presented with this amendment. Thus, the subject matter of the present method claims was not surrendered in the application for the '635 patent. Thus, in addition to being allowable for these same reasons claim 43 is allowable (discussed below), method claim 69 and the claims that depend therefrom are further allowable, since there is clearly no issue of possible recapture of previously surrendered subject matter.

Regardless of the fact that new claim 69 is a method claim being presented for the first time, as noted above, claim 69 includes all the limitations of now canceled claim 43 (which in turn includes the limitations of now canceled claim 16). The limitations added by claim 43 are related to the limitations being removed from claims 1 and 8. This relatedness was discussed at length in the Reply filed on December 3, 1999.

In particular, as pointed out on page 19 of the December 3, 1999 Reply, the narrowing limitation added to claims 16 and 31, the limitation being removed and the limitation being added are related to each other. Specifically page 19 states:

The limitation being removed from claims 1 and 8 defines an interrelationship between the elastic plate, the flywheel body and the reinforcing member (reference Nos. 2, 5 and 4, respectively, in Figure 1 of the present application), and axial movement of the flywheel body relative to the reinforcing member and elastic plate. Likewise, the narrowing limitation being added recites an interrelationship between the crankshaft, elastic plate, the flywheel body and the reinforcing member (reference Nos. 1, 2 and 4, respectively), and axial movement of the flywheel body relative to the reinforcing member and elastic plate, albeit somewhat more broadly.

Now canceled claim 43 (which limitations are included in new method claim 69) further emphasizes the relation of the added limitation with the removed limitation, in particular the structure of the flywheel that provides for axial movement of the flywheel body.

In claim 1¹ of the '635 patent, the claim limitation being removed recites each of the elastic plate, flywheel body and the reinforcing member having first portions that *define clearances* for allowing the first portion of the flywheel body to move axially between the first portions of the elastic plate and the reinforcing member, and the axial order of the elastic plate and reinforcing element. Thus, this particular limitation defines elements (i.e., the clearances) that allow for axial movement of the flywheel body and the axial order of the components. This was to further distinguish over Numata et al. which taught a plate member 24 (i.e., corresponded to a reinforcing element) disposed entirely on the opposite side of the elastic plate 3 from the flywheel body, and to further distinguish from Japanese Patent Publication No. 63-190639, which disclosed a stopper element 21 between the flywheel body and the flexible plate.

In defining the axial movement aspect, applicants were following older conventional U.S. claim drafting practice that discouraged direct claiming of “intangible” elements such as spaces or volumes without physical structure. For example, under older claim drafting practice it was generally prohibited to claim a “hole” per se. Instead, it was necessary to claim physical structure that would define the “hole,” e.g., “a rod having a hole at one end.” See e.g., *In re Hall*, 77 USPQ 618, 168 F.2d 92 (CCPA 1948) (noting that “[t]he word ‘space’ in our opinion can not be considered anything tangible. It is something without limits or might be aptly described as ‘nothing.’”). See also, *Ex Parte Davin*, 1902 CD 251 (holding that “[a]n ‘opening’ should not be made a positive or direct element in combination claims, for the reason that *an opening is not a tangible thing*. It can exist only in connection with some other element.”). This was precisely the situation applicants were faced with when defining the clearances for the movement of the flywheel body. That is, rather than defining the clearance directly, the clearances were defined in terms of the first portions of the flywheel body, the elastic plate and the reinforcing members. Aside from defining the axial order of the elastic plate vis-à-vis the reinforcing element, these portions add nothing to the claim other than to define the “structure” of the clearances.

In totality, the structural limitations of method claim 69 are substantially equivalent to the limitations removed from claim 1 in that they recite a first portion of the

¹ Claim 8 is not included in this discussion because there are no pending independent claims corresponding to this claim.

flywheel body and the elastic plate. This first portion defines a first clearance for allowing axial movement of the flywheel body. Claim 69 also defines the axial order of the elastic plate vis-à-vis the reinforcing element. The difference between the old limitations and the new limitations lie mainly in the space on the side of the flywheel body opposite to the first clearance. Specifically, instead of using structure of the reinforcing element and the flywheel body to define another clearance and the relationship of the reinforcing element to the rest of the structure, applicants have instead claimed a first free space for allowing the flywheel body to axially move, and have claimed the axial order of the crankshaft, the elastic plate and the reinforcing element. However, the effect is still the same, namely, spaces are defined for allowing axial movement of the flywheel body, and the axial order of the elastic plate vis-à-vis the reinforcing element is defined. Thus, although somewhat different terminology is employed, substantially the same structure is being claimed, structure that allows for axial movement of the flywheel body and defines the axial order. There is no authority that applicants or their representatives are aware of that requires exact word for word claiming to avoid recapture, even under its most limiting interpretation. Moreover, the inclusion into a claim of unnecessary recitations of structure due to following outdated claim drafting “principles” is clearly the type of “error” that is correctable by reissue.

In summary, the material features that applicants relied upon to establish the patentability of the original patent claims (i.e., that which was relinquished in the original patent) are still in the reissue application claims, i.e., the two clearances for the movement of the flywheel body, and structure for defining axial order of the elastic plate vis-à-vis the reinforcing element. The structural element that has been deleted from the reissue claims, namely, the “first portion of the reinforcing element,” was itself clearly not material to allowance of the original patent claims. As noted above, this first portion was solely to define a clearance and the axial order of the elastic plate vis-à-vis the reinforcing element.

Rather, the recitation of this piece of structure in the original patent claims was partly included as a result of antiquated claiming rules that required it to define the clearance. Consequently, there is no material difference in this regard between the original patent claims and the present reissue application claim 69, and claims dependent thereon, which do in fact, still require the presence of the two clearances and the same axial relationship of the elastic plate and reinforcing element, both of which were included in the original patent claims during prosecution of the patent.

Accordingly, since no recapture is present under any interpretation of the recapture doctrine, allowance of claim 69 and the claims that depend therefrom are respectfully requested.

Likewise, there is no recapture with respect to new method claim 72 and the claims that depend therefrom, because these claims are also being presented for the first time during prosecution of the present reissue application. As noted above, the only method claims that have been previously on-file were method claims 6 to 8 that were present in the originally filed application. However, these claims were directed to a method for forming a crankshaft assembly, and not the method claims presented with this amendment. Thus, the subject matter of the present method claims 72 and the claims that depend therefrom was not surrendered in the application for the '635 patent. Since the prior art fails to teach or suggest the method as claimed in claim 72 and since there is no recapture with respect to claim 72, applicants submit this claim is also allowable.

Finally, legal research performed by Applicants' representatives found no cases that support the proposition that the PTO can reject claims of one statutory category (i.e., method) based on an alleged case of recapture of claims of a different statutory category (i.e., product). Thus, there is no impermissible recapture of the pending method claims.

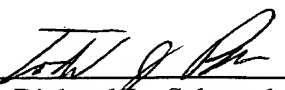
In view of the foregoing, applicants respectfully submit that this reissue application is now in condition for allowance. Early issuance of a Notice of Allowance is respectfully requested. If the Examiner Luong has any questions or comments that could place this application into even better form, he is encouraged to contact the Applicants' undersigned representative at the number listed below.

Respectfully submitted,

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